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PLANTARUM PHANEROGAMARUM NOMINA ET SYNONIMA
OMNIUM GENERUM ET SPECIERUM A LINNAEO USQUE
AD ANNUM MDCCCLXXXV COMPLECTENS NOMINE
RECEPTO AUCTORE PATRIA UNICUIQUE
PLANTAE SUBJECTIS

SUMPTIBUS
BEATI CAROLI ROBERTI DARWIN

DUCTU ET CONSILIO
JOSEPHI D. HOOKER

CONFECIT
B. D. JACKSON

The printing of Part II is well advanced, and the completion of the whole work may be expected during 1894.

The following communication from Sir Joseph Hooker, F.R.S., etc., etc., explains the origin, plan and purpose of this important and comprehensive undertaking:

"Shortly before his death Mr. Darwin informed me of his intention to devote a considerable sum in aid or furtherance of some work of utility to biological science; and to provide for its completion, should this not be accomplished during his lifetime. He also informed me that the difficulties he had experienced in accurately designating the many plants which he had studied, and ascertaining their native countries, had suggested to him the compilation of an Index to the Names and Authorities of all known Flowering Plants and their Countries, as a work of supreme importance to students of systematic and geographical botany and to horticulturists, as a fitting object of the fulfilment of his intentions

"I have only to add that, at his request, I undertook to direct and supervise such a work; and that it is being carried out at the herbarium of the royal gardens, Kew, with the aid of the staff of that establishment." JOS. D. HOOKER.

London: Henry Froude, Clarendon Press Warehouse, Amen Corner, E.C.

THE CANTILLAS OF NORTHERN LOWER CALIFORNIA.

ALTHOUGH known to Cortes, who spent a million of dollars in its exploration in the fifteenth century, Baja California is still largely a "terra incognito." Possessing the disadvantages of Mexican rule, a formerly unpromising northern frontier and a barren coast, it offered few inducements for its exploration or the development of its agricultural and mineral wealth; yet travel in this strange land becomes irresistibly fascinating to the naturalist, as every step gives new forms of animal and vegetable life, till the productions of the temperate zone merge into those of the tropics about two hundred miles south of San Diego.

Nearly one hundred miles southeast of the city of San Diego lies the forest of Parry's graceful pinyone pine (Pinus Parryana Engelm), bordered on the east by the broken peninsular range of mountains, consisting of gigantic masses of coarse granite devoid of vegetation other than the pretty Ivesia Baileyi, ornamenting the crevices of the rocks with its fern-like leaves, or occasional shrubs and trees that find a precarious existence in the scanty soil among the huge boulders and in the crevices of rocks, formed principally by the decomposing granite. These sierras were made famous with the surrounding region by the botanical collections of Dr. Edward Palmer in 1876 who called them the Tantillas — a name unrecognized by the Mexicans and Indians, who call them the Cantillas or Castillo Blanco—the "precipices" or the "white castle,"—and the great canyon at their base the "Canyono de la Bajada."

These mountains are situated about forty miles south of the United States boundary and sixty miles west of the Colorado river near its mouth. The approach from the boundary line at Campo is over a natural wagon road: for thirty miles through a rolling country of a similar granitic formation, the soil largely composed of the decomposed granite. The sparse vegetation, mainly consisting of Arctostaphylos, Adenostoma and other similar shrubs, with now and then a small cluster of Quercus agrifolia, is similar to that of San Diego county; toward the end of the thirty miles, however, and for the remainder of the distance, stranger shrubs and trees make their appearance. Among others, Quercus Palmeri, Q. pungens and Q. Emoryi take the place of Q. dumosa (the common shrub oak of Southern California), and straggling bushes of Juniperus Californicus with Pinus Parryana, Nolina Palmeri (the sotole of this district) and many other less prominent plants, changes the aspect of the country on entering the region of the Cantillas.

The granitic rocky soil is here found overlying a strata of gold-bearing clay which yields to the patient miners of Indian, Greek, Spanish, English and American nationalities a scanty reward for their labor. Dozens of log huts have been erected throughout the forest, covered with shakes or thatched with Nolina leaves and plastered with mud, and hundreds of acres have been dug over, the miners digging large pits, five or more feet deep and eight or ten feet square, and often hauling the dirt several miles to water (or hauling the water to the dirt) to wash for the usually fine grains, though the gold is sometimes found in coarse grains or nuggets.

The forest of Parry's pinyone, occupying the stretch of table lands to the west of the Cantillas, extends northerly to the United States, a few trees straggling across the line, while on the east at the broken Cantillas it is abruptly displaced by Pinus monophylla that forms an extension of the pinyone forest to the hills bordering the desert, where it is more

exposed. These nearly related species are found side by side, yet neither species invades on the territory of the other.

On the north, Parry's pinyone extends to the higher table lands of Santa Catalina mountains of an altitude of 6,000 to 7,000 feet, where it is restricted to the rocky hills, the pinyos or "bull pine" (P. Jeffreysi) here forming a seemingly limitless forest.

One Indian employed as guide, calling himself Jose Capitan of the Picos (or in his own style Capitan "Jose Capitan Pico") and seemingly a permanent resident of the country, worked in the mines for 60 to 80c per day. The Indians met in 1883 called themselves "La Costas," and claimed to spend the winters on the shores of Todos Santos bay, where they are employed in getting abalones (Haliotis), moving to this region during the pinyone season, the pinyone nuts forming an important addition to their fare. Huge piles of alternate layers of the cones and pine branches are burned, when the seed is easily shaken out ready roasted for eating. Several of the Indians met later called themselves Maricopas, and were seen to depart for the Colorado river. A family of Cocopa Indians were found in the great canyon in 1883, but not seen later, who had not adopted the cast-off garments of civilization, as the other Indians had mostly done, but were in native dress. The costume of one of the La Costa Indians at Todos Santos bay has been described to me as consisting of a pair of red mittens!

The mescal plant (Agave deserti) forms an important article of food with the Indians, and the fiber of the leaves is utilized in making ropes, cord, sandals, and other things. The wild Nicotiana is used for tobacco; Sambucus glauca and Mentha Canadense furnishes their tea when they cannot buy the genuine; the beautiful golden lichen, Evernia vulpina, is called as "good as sugar"; the seed of a species of Mentzelia and of Echinocactus are pronounced as "very good to eat" when made into flour and cooked, and the mesquite and tesoto beans are made of use for food. An occasional attempt is made at raising a few melons and a little corn by the Indians, but "Yankee fare" is preferred, naturally, to their own native productions, our sugar, salt and flour being fully appreciated.

In leaving the Parry's pinyone forest and entering the district of Pinus monophylla, a truly desert flora is met, other varieties of shrubs, cacti and brush generally abound, but Rhus ovata, Wats., Arctostaphylos pungens and a few others follow along the old Fort Yuma trail, besides the pretty Lœselia, Frasera Parryi, Argemone hispida and others abundant among the pinyones. But these disappear in descending several thousand feet into the great canyon which has yielded such a rich flora to the world. Fouquiera splendens stands guard along the trail, Echinocactus cylindraceus stands erect, five to seven feet high, and thousands of the "blue palm," with their glaucous green tops, dot the borders of the arroyo.

The beautiful "Chile de la agua" (Palmerella debilis, Gray) clusters around the single spring near the base of the trail, and a few ferns among the rocks, Parry's Notholæna, Venus-hair and a Woodsia, form exceptions to the characteristically spiny plants.

The sides of the canyon are mostly of granite, containing quantities of black and white mica, garnets, tourmaline, feldspar, with occasional stratas of slate, usually perpendicular. A white rattlesnake, about the color of the dark granite, was seen on the desert, but animal life is scarce excepting a great variety of insects and lizards.

A Succinea, Vertigo ovata, Planorbis parvus, Physa and Limax sp. completes

the list of the known desert mollusks, two of them distributed over the whole United States and perhaps a third also.

A curious thing was noticed where the clay from the gold washings had settled in the holes, not forming level layers on the bottom only, but instead settling on the sides as well, and forming thick and unequal layers. These remarkable formations of strata were often exposed by other washings, showing the irregularly curved and distinctly marked stratas of clay (with other dirt), unequal in thickness. The holes may have been made by horses after the deposit, the layers bending under the weight, as they were unbroken. C. R. Orcutt.

WATER ON THE COLORADO DESERT.

THE Colorado river is one of the main sources of water on the Colorado Desert; the numerous sloughs, lagoons and so-called wells, including New river channel, Lake Maquata and the Dry lake, are all dependent upon its annual overflow,—and when the summer freshet subsides without the Colorado river having filled its own banks, as is very frequently the case, all these places are dry. In fact, of late years an overflow is rather an exception than the rule. In 1884 there was a great overflow which filled everything to overflowing on the desert, but from that year until the summer of 1890 no overflow of note has been recorded. It will therefore be recognized as a truism that New river and its lagoons cannot be relied upon as an unfailing source of water, and the series of wells that once existed along the old emigrant trail are no longer very useful to the occasional traveler, and never were relied upon for any large supply of water. Sometimes rain on the desert will partially fill the numerous holes, lagoons and depressions, where it remains until evaporated by the sun—the hard clay of this region being nearly impervious to water.

A sample of water taken from the Colorado river the 18th of September, 1890, upon analysis by the California State Mining Bureau shows upon filtration a sediment in the ratio of 4.861 grammes to the liter. The water used by the railroad at Yuma, Arizona, is first pumped into one of three tanks, each of a capacity of 100,000 gallons, where the water is allowed to settle. The tanks are about seven and a half feet in depth and forty by fifty feet on top, somewhat smaller proportioned at the bottom. The resulting sediment after the water has stood for a few days is very variable with the season. In April, 1889, it varied from eight to fifteen inches of mud; in May, June and July, five to seven inches only; in August, from nine inches on the 4th to twenty-two inches on the 13th (the water standing only three days for this result) to six inches on the 28th; in October and November the minimum of three inches of sediment was recorded, while in December from nine to thirteen inches were deposited. In August was the season of the annual freshet when the river was highest and most rapid and the sediment was correspondingly great. At high water the extraneous matter held in solution may be considered to be approximately ten per cent.

The water of New river and its lagoons, like the source in the Colorado river, holds a very considerable quantity of fine clay in suspension, and after long standing in the sun becomes more or less charged with organic impurities. It appears tolerably free from soluble salts, not perceptible to the taste, but upon evaporation it becomes brackish and shows the presence of salt by a slight incrustation on the shores of the lagoons.

The old emigrant trail from Yuma to California, later known as the stage line,

possessed the following watering places —wells in name only as we understand that term. Traveling from San Diego, the first station possessing desert characteristics is in the Jacumba valley at the hot springs or Larkin station. The United States and Mexican boundary line divides this valley near its centre. It contains several thousand acres, useful mainly for grazing, with cottonwood and willow along the water, cat's claw acacia, desert willow and the like desert vegetation around the drier parts. Hot and cold springs side by side were formerly quite an attraction, but are no longer kept in order.

Ten miles further, over the last rocky divide, brings us to the Mountain Springs —a solitary spring in a little ravine near the Rock House or Summit House of the old stage days. This is situated about half way down the side of the mountain and is good mountain water from out of the solid granite. The canyon leading from Mountain Springs to the sandy plains of the desert, at the eastern base of the mountains, in April, 1889, I found gorgeous in a multitude of bright flowers Mimulus, Gilias, Eschscholtzias and a host of others. Echinocactus cylindraceous stands on the sides of the rocky canyon like sentinels guarding the pass. The cat's claw now and then asks you to "wait a bit." The lively lizards invite you to a game of tag—in which they are sure of victory. Now and then a rattlesnake may be found sunning himself in your path. Six or eight miles of this picturesque canyon road brings us to the open plain of granitic sand and wash, across which slow progress is made in the hot rays of the sun. The general direction now taken is nearly due east, and after eight or ten more miles are traversed we reach the first desert station of Coyote wells.

At Coyote wells we first strike the alluvium of the Colorado river—or what closely resembles it in character. The "wells" originally consisted of holes dug in the clay by the coyotes, who cannot long survive without water. Man has improved them but little. The hole which supplied the party of six or eight men and as many mules in the spring of 1890, had been dug by a cattle man to fair proportion; but the water emitted a most repulsive stench during our entire stay, though there was little unpleasant taste to it, and it answered well for coffee and cooking. Later in the season it became so impure, and so thoroughly imbued with alkali as to be unfit for man or beast, and perhaps would have been fatal if any had ventured to use it. Near one of the two mesquite trees at this place another little hole was dug out when I visited the place in the following October, and tolerably pure water was, and always can be, obtained. Scarcely a trace of the old adobe station house remains, and two small mesquite trees are the only land marks to guide the traveler to this place, and they cannot be seen at a distance of more than half a mile probably in any direction.

Twenty-two miles due east (some say sixteen or eighteen miles only), is the station house at Indian Wells—Los Posos de los Indios. The only water is in lagoons filled at rare intervals by rains or from New river's channel, of which they are said to form a part. The fine reddish-yellow clay is so thoroughly suspended in the water that it does not become deposited to an appreciable degree until all the water has become evaporated. Without a guide one might readily fail to find the water holes at Indian Wells, as they are away from the station buildings. For a good part of the year they are credited with being dry, and should never be depended upon for a water supply. The banks of New river at this place produce a dense growth of mesquite and other vegetation, especially rank after a heavy rain or overflow. Cruciferous plants, only a few inches in

height at my visit, and in flower, were evidently identical in species with dry stalks of previous year's growth, in which I might have played hide and seek.

Fifteen miles due south of Indian Wells, just below the United States line, was New River station, which I have not seen. But the water at New River station, from descriptions, is found under identical conditions and is equally unreliable. Fifteen miles further due east from New River station was Alamo, or Alamo Mocha. The well at Alamo is said to have been eighteen feet deep and imperfectly curbed during the old emigrant days, but for years has been caved in and furnishes no water to travelers. The water was brackish and said to be exceptionably bad.

Cook's well and the Mesquite well were muddy holes in the clay nearer the Colorado river. Los Siete Posos, or Seven Wells, I have learned but little. They were about nine miles south of east (nearly east) of Alamo Mocho. Gardener's or Burke's wells were about eleven miles still further due east.

The distances may be recapitulated (with such slight variations as result from information from different parties), with additional notes on the water, as follows:

Carrizo Creek: Water in spring at source, 68 deg. to 75 deg. F., containing sulphate of lime, magnesia and chlorite of sodium. (Fraser, Emory's Rep. 102.)

Indian Wells: Thirty-six miles from Carrizo creek; "excellent water can be had"! — or none.

Alamos: Alamo or Alamo Mucho: thirty miles from Indian Wells, sixteen miles from New River. Water bad; well eighteen feet deep, caved in; no water now to be had.

Burke's Wells (formerly called Gardener's Wells): Eight miles from Alamo; water brackish, four feet from the surface in a ravine fronting the station house.

Seven Wells: Nine miles from Burke's Wells; "water somewhat salty."

Cook's Wells: Nine miles from Seven Wells; good water.

Hanlon's Ferry: Seventeen miles from Cook's Wells, on west bank of Colorado River.

Fort Yuma: Nine miles from Hanlon's Ferry.

Total distance, Carrizo Creek to Fort Yuma, 118 miles.

In the most of the larger canyons in the Peninsula Mountains that open into the desert water may be obtained. A notable instance is the famous Cantillas Canyon, in Lower California, where Dr. Edward Palmer found the type of his Palmerella and the beautiful blue palm (Erythea armata) in 1876. This canyon is known under various designations, but best as the Horse-thief Canyon, since in early days it was a noted rendezvous for the desperadoes of the two Californias and of Arizona and Sonora, who found it a favorite practice to steal on the coast and cross the desert via this canyon, or vice versa.

The Mountain Springs canyon is the first, I believe, north of the line where water can be depended upon. About half-way on the road from Mountain Springs to Coyote Wells, before leaving the canyon, a left-hand road may now be detected, leading up a side canyon and over a divide and back in the same direction as lies Mountain Springs. This leads to a curious spot known as Dos Cabesas or Haydon's Camp, and excellent water in abundance has been developed in the precipitous granite walls which almost enclose the little nook. Rhus ovata grows almost to the proportions and form of a tree here, and has been considered as a fair indication of water when found growing on the desert borders.

Dos Cabesas is one of the best stations for desert work that I have yet found. From there one can travel in several direc-

tions. The good water enhances its value.

The next canyon is that of Carrizo Creek, which drains a large area of territory from the summit of the Laguna and Cuyamaca mountains with the oak and pine forests to the pinyone forests in Lower California. The large Vallecito valley and the Jacumba valley drain into it and fair storage reservoirs could be secured in its upper portions sufficient for the irrigation of large portions of the alluvial plains below.

The San Felipe canyon and the Coyote creek, which joins it from near Borregio Springs, also drain a large area of the eastern slope of the Peninsula mountains — and the remarks about storage reservoirs may be here repeated. The San Felipe and Carrizo creeks, it will be observed in consulting a good map, become one soon after emerging from the mountains, and their surplus waters flow united into Dry Lake.

The San Felipe for a good portion of the length of the canyon is usually dry, and neither it nor the Carrizo creek ever flow with any regularity after leaving the canyons.

Borregio or Sheep Springs are situated in a low marshy meadow where water in a few spots may be obtained by digging a foot or two below the turf. A few species of grass, including, of course, Distichlis maritima, which is the most abundant of all. Whenever even a few plants of this grass are found water may be found within a few feet of the surface that usually no man need to fear to drink. The turf is crisp as if frozen, and every bare piece of earth carries the illusion still further by its snowy whiteness — denoting the presence of alkali in the soil.

On the northern slope of the Superstitious mountain, in a little cienega, there is said to exist a pleasant and healthful sulphur spring.

A group of soda springs lie "directly west of Salt Creek," but I have not visited the locality, the location of Salt Creek not being very clear in my mind. They have been visited by several parties, who report the supply of water as abundant and very agreeable to the taste. Carbonate of lime and carbonic acid gas are supposed products of these springs, though the water I believe has never been analyzed.

The Dos Palmas springs are saline and have a temperature of 80 deg. F., according to Dr. W. F. McNutt. Reference will probably be made to the locality again, as it is one of great interest.

The springs at the Cahuilla Indian villages "contain soluble salts in small quantities" At Palm Springs the water in the hot springs appears to be very pure and free from solid impurities. "The unpleasant odor of sulphuretted hydrogen is removed by boiling."

Another source of water well known to travellers are the tanks or natural cavities in rocks which catch and hold rain water for long periods of time. Such a tank exists on the eastern point of Carrizo Mountain, and small ones are not rare in any of the mountains. To the north of the Southern Pacific railway in the mountains there is a large natural reservoir which gave its name to the nearest railway station — Mammoth Tank. Between Canyon and Chuckawalla springs these tanks are abundant, and each, or each group of tanks, receives some appropriate or fanciful name.

These tanks will retain the water in a pure state for a long period of time, and if large enough become coated over with slime and dead matter, which renders evaporation slower. Beneath the filth the water is found to be cool and to retain its purity. Often they are filled with sand or entirely obliterated, with only a moist circle of sand to denote the presence of water. Such a find has proved a blessing to many a solitary prospector in the arid mountains of this desert and in Arizona, New Mexico and Sonora.

WINDS AND THEIR EFFECTS ON THE COLORADO DESERT.

The prevailing winds at Fort Yuma are from the north and northwest, but southerly winds blow from June to October. The winds from the north are very dry and violent. At Seven Palms, on the Southern Pacific railway, the winds are almost constant through the year, sweeping down from the San Gorgonio pass, keeping the air filled with clouds of fine dust and sand, and heaping up the loose sand against the barren hills. With such force and constancy is this wind at Seven Palms, that the glass in the windows of the station house appears as if subjected to an artificial sand blast. A gang of men is kept engaged the larger part of the year shoveling the sand off the railroad tracks, which are often covered in a single night. The workmen wear cloth masks, with a piece of glass in front, to protect their heads from the driving, cutting sand. The rocks are curiously affected by this natural sand blast, quartz receiving a fine polish as a rule, but often quartz, limestone and other rocks will be beautifully sculptured in the most artistic way.

The pebbles on the mesa formations of the desert are peculiarly polished and brilliant, as if they had been oiled or varnished—a result no doubt accomplished by the constant action of loose sand upon the surface, driven by the winds. By this constant attrition of the sand, in some places, each grain has become a perfect sphere, instead of retaining its usual angularity.

The vegetation at Seven Palms is restricted to a few species on account of the drifting sand. Larrea and other bushes I found frequently retaining a hold upon life by a slender stem—the side exposed to the wind blackened as by fire and cut through to the heart by the cutting sand blast. It seemed almost incredible to believe that vegetation could actually be subjected to such a test and still retain vitality.

Old tin cans were polished and blackened in the sandstorm as if treated to an application of stove polish. Bottles were eroded in a similar way to the glass in the windows.

The mountain slopes west of the Colorado desert are frequently subjected to heavy winds which give the traveler little comfort. But no damage has ever been reported, and the violence of the winds does not seem to approach in intensity the cyclones of other sections of the country—possibly because there is little to be damaged or no one exposed to their violence to report.

The sand storms on the plains occasionally are severe on the transient traveler. It is impossible to face them at times, and one needs to adopt the Arab's method of lying prone on the ground until the storm passes by. The air is sometimes so filled with fine dust that one cannot see distinctly a hundred feet away, but if remote from the sand hills and the driving, cutting sand, no serious inconvenience results.

LOVE EXPRESSED.

So sweet, within my arms to hold,
A baby fresh from heaven,
And wrap it round with love fourfold,
Ere it a smile has given.

So sweet, its presence warm to feel,
Just breathing on my breast,
I must in spirit thankful kneel
To God, for love expressed.

E. E.

San Diego, Cal., Aug. 19, 1893.

The island of Matanzas shows a shrinkage this year in its sugar crop of 22 per cent. Lack of rain is cited as the cause.

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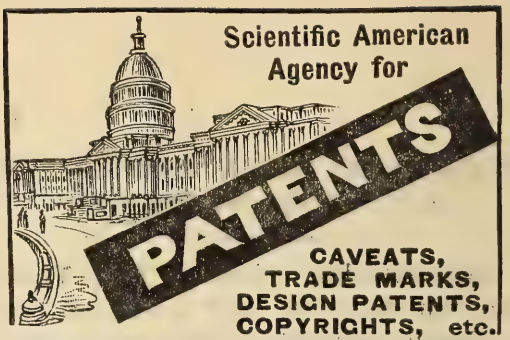

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G. A. R. NOTICE.

We take this opportunity of informing our subscribers that the new Commissioner of Pensions has been appointed. He is an old soldier, and we believe that soldiers and their heirs will receive justice at his hands. We do not anticipate that there will be any radical changes in the administration of pension affairs under the new regime.

We would advise, however, that U.S. soldiers, sailors, and their heirs, take steps to make application at once, if they have not already done so, in order to secure the benefit of the early filing of their claims in case there should be any future pension legislation. Such legislation is seldom retroactive. Therefore it is of great importance that applications be filed in the De partment at the earliest possible date.

If U. S. Soldiers, Sailors, or their Widows, Children, or Parents desire information in regard to pension matters, they should write to the Press Claims Company, at Washington, D. C., and they will prepare and send the necessary application, if they find them entitled under the numerous laws enacted for their benefit.

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NOT SO HARD AS IT SEEMS.

A patent strikes most people as an appallingly formidable thing. The idea is that an inventor must be a natural genius, like Edison or Bell; that he must devote years to delving in complicated mechanical problems and that he must spend a fortune on delicate experiments before he can get a new device to a patentable degree of perfection. This delusion the company desires to dispel. It desires to get into the head of the public a clear comprehension of the fact that it is not the great, complex, and expensive inventions that bring the best returns to their authors, but the little, simple, and cheap ones—the things that seem so absurdly trivial that the average citizen would feel somewhat ashamed of bringing them to the attention of the Patent Office.

Edison says that the profits he has received from the patents on all his marvelous inventions have not been sufficient to pay the cost of his experiments. But the man who conceived the idea of fastening a bit of rubber cord to a child's ball, so that it would come back to the hand when thrown, made a fortune out of his scheme. The modern sewing-machine is a miracle of ingenuity—the product of the toil of hundreds of busy brains through a hundred and fifty years, but the whole brilliant result rests upon the simple device of putting the eye of the needle at the point instead of at the other end.

THE LITTLE THINGS THE MOST VALUABLE.

Comparatively few people regard themselves as inventors, but almost everybody has been struck, at one time or another, with ideas that seemed calculated to reduce some of the little frictions of life. Usually such ideas are dismissed without further thought.

"Why don't the railroad company make its car windows so that they can be slid up and down without breaking the passengers' backs?" exclaims the traveler. "If I were running the road I would make them in such a way."

"What was the man that made this saucepan thinking of?" grumbles the cook. "He never had to work over a stove, or he would have known how it ought to have been fixed."

"Hang such a collar button!" growls the man who is late for breakfast. "If I were in the business I'd make buttons that would'nt slip out, or break off, or gouge out the back of my neck."

And then the various sufferers forget about their grievances and begin to think of something else. If they would sit down at the next convenient opportunity, put their ideas about car windows, saucepans, and collar buttons into practical shape, and then apply for patents, they might find themselves as independently wealthy as the man who invented the iron umbrella ring, or the one who patented the fifteen puzzle.

A TEMPTING OFFER.

To induce people to keep track of their bright ideas and see what there is in them, the Press Claims Company has resolved to offer a prize.

To the person who submits to it the simplest and most promising invention, from a commercial point of view, the company will give twenty-five hundred dollars in cash, in addition to refunding the fees for securing the patent.

It will also advertise the invention free of charge.

This offer is subject to the following conditions:

Every competitor must obtain a patent for his invention through the company. He must first apply for a preliminary search, the cost of which will be five dollars Should this search show his invention to be unpatentable, he can withdraw without further expense. Otherwise he will be expected to complete his application

and take out a patent in the regular way. The total expense, including Government and Bureau fees, will be seventy dollars. For this, whether he secures the prize or not, the inventor will have a patent that ought to be a valuable property to him. The prize will be awarded by a jury consisting of three reputable patent attorneys of Washington. Intending competitors should fill out the following blank, and forward it with their application:

"————, ——, 1893.

"I submit the within described invention in competition for the Twenty-five hundred Dollar Prize offered by the Press Claims Company.

"————."

NO BLANKS IN THIS COMPETITION.

This is a competition of rather an unusual nature. It is common to offer prizes for the best story, or picture, or architectural plan, all the competitors risking the loss of their labor and the successful one merely selling his for the amount of the prize. But the Press Claims Company's offer is something entirely different. Each person is asked merely to help himself, and the one who helps himself to the best advantage is to be rewarded for doing it. The prize is only a stimulus to do something that would be well worth doing without it. The architect whose competitive plan for a club house on a certain corner is not accepted has spent his labor on something of very little use to him. But the person who patents a simple and useful device in the Press Claims Company's competition, need not worry if he fail to secure the prize. He has a substantial result to show for his work—one that will command its value in the market at any time.

The plain man who uses any article in his daily work ought to know better how to improve it than the mechanical expert who studies it only from the theoretical point of view. Get rid of the idea that an improvement can be too simple to be worth patenting. The simpler the better. The person who best succeeds in combining simplicity and popularity, will get the Press Claims Company's twenty-five hundred dollars.

The responsibility of this company may be judged from the fact that its stock is held by about three hundred of the leading newspapers of the United States.

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